Partner Engagement
Theater Session Participation
Success Story - SAP on Azure at Dairy Farmers of America

SAP SAPPHIRE NOW
Orlando | Jun 5th 2018
# Theater Session

## Theater Session Name: Success Story - SAP on Azure at Dairy Farmers of America

<table>
<thead>
<tr>
<th>Abstract</th>
<th>Company Bio</th>
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<tbody>
<tr>
<td><strong>Case Study with Dairy Farmers of America on running SAP on Azure Cloud and Best practices and lessons learned for efficient cost effective Landscape as a Service (LaaS) on Azure with real time replication of SAP production, associated BoltOn, Route Management Systems, Manufacturing execution systems environments on MS Azure. Additionally, DRaaS (Disaster Recovery as a Service) was also implemented for all systems migrated to Azure footprint. Approach was based on Azure Express Route providing optimal data protection minimizing downtime and right sized infrastructure footprint.</strong></td>
<td>Khoj Information Technology is a Microsoft Gold Partner and SAP Silver PartnerEdge Partner with deep expertise in SAP Technical Architecture, Cloud Migration and Managed services and in implementing Software Defined Data Centers for Fortune 500 clients. Khoj’s core experience with SAP, coupled with experience in Cloud Migration and Cloud Managed Services for Azure make us a clear choice for complex SAP initiatives on cloud.</td>
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Agenda

- Introductions
- Business Drivers
- Scope of Migration
- Khoj Introductions.
- Approach
  - Timeline
  - Architecture
  - Technology
- Challenges
- Next Steps
Lorin Phillips, Director of Hosting and Network Service Delivery, DFA

Lorin is Director of network and hosting at Dairy Farmers of America. Lorin has over 25 years of IT experience with over 18 years in SAP involving every major release since 3.1. Specialties include large scale platform migrations, multinational team development and organizational transformation. Lorin holds multiple certifications and degrees, including a Bachelor of Science and Master of Science in Civil Engineering from Purdue University and a Master of Science in Business Administration from Indiana Wesleyan University.

Ajay Dhingra, President, Khoj Information Technology

Ajay has 22 years of progressive experience in IT and SAP project management. He has been part of more than 30 SAP implementations and been part of the leadership team on numerous client engagements. As part of Khoj’s consulting services Ajay has provided consulting services for well known clients such as Sony, Home Depot, Campbell Soup, Fujifilm and AES to name a few. Prior to founding Khoj Ajay was a Manager with Accenture and Principal Consultant with Price Waterhouse. Ajay holds a Bachelor of Science in Electronics & Telecommunication degree from BIT (Ranchi), a Masters in Science from Drexel University and a Masters in Business Administration from NYU Stern.
Headquartered in Kansas City, Kan.

A global dairy foods company owned by dairy farmers

Family farm cooperative members
• More than 8,500 member farms including over 14,500 members
Diversified product portfolio
- Fresh milk and yogurt
- Shelf-stable beverages
- Dairy foods
- Ingredients

42 manufacturing facilities

2017 annual sales
- US $14.6 billion

Fourth largest global dairy company*
- Largest USA dairy company*

*Source: Rabobank dairy sales turnover data, 2016
Business Challenge:
- Excessive complexity
- Cost Inefficient
- Inflexible
Business Solution: Insource Staff, Move to Azure

- Multiple weekends.
- Mandatory outages.
Why Microsoft Azure?

- Datacenters hosting SAP ecosystem closing
- Positive experience in Azure
- Strong market position of Microsoft Azure “cloud”
- DFA internal skillset – a Microsoft shop
We needed help to move

• Brain drain from out-sourcing
• Inflexible timeline
• Volume

Solution offerings (a few):
- SAP Landscape and Infrastructure services.
- Cloud Managed services
- Consultants & Staff: 90+
- Offices
  - WHQ, Ramsey, NJ, US
  - Solution Delivery Center, Gurgaon, India
  - Regional HQ, New Delhi, India

Clients: 30+

Partnerships
How to migrate a data center?
Microsoft Azure Site Recovery Services

Enhanced VMware to Azure: Architecture

Source: VMware VMs & Physical Servers
Master Target (fallback)
Data Channel

Microsoft Azure Site Recovery

Process Server – Used for Caching, Compression & Encryption
Config Server – Used for Centralized Management
Mobility Service – Captures all data writes from memory
Master Target – Used for fallback only
1. Sandbox (X) systems were not be migrated, but rather built using a system copy in Azure, when required.
2. Milk (M) Marketing systems were not be migrated.
## Scope

### Bolt-on (3rd Party) Products

<table>
<thead>
<tr>
<th>Bolt-on Products</th>
<th>DEV</th>
<th>QA</th>
<th>PRD</th>
<th>Other</th>
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</thead>
<tbody>
<tr>
<td>Open Text</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>my.dfamilk.com Portal (DMZ)</td>
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<td>X</td>
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<tr>
<td>weare.dfamilk.com Portal</td>
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<tr>
<td>Sterling B2Bi EDI</td>
<td>X</td>
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<tr>
<td>RightFax</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Taulia POD &amp; Taulia Kofax</td>
<td>X</td>
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<tr>
<td>Active Batch</td>
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<td>X</td>
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<tr>
<td>NLB (F5 Alternative)</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td>Citrix (or another VDI)</td>
<td>X</td>
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1. RightFax Development environment in provided as SaaS
Azure Site Recovery Architecture – Steady State

- Primary DC
  - ASR Management Server
  - Cross App Consistency Group – Port 20004

- Azure Edge
  - Data Transfer
    - Port 9443 / 443
  - Reserved Internet Bandwidth

- Site Recovery To Blob Storage
  - Azure Isolated Virtual Network 10.115.0.0/24
    - Subnet 10.115.91.0/24
    - Subnet 10.115.121.0/24

- MS
- SAP Server 1
- SAP Server 2
- SAP Server 3
- SAP Server 4

Servers in Scope for DR

- 10.xxx.xxx.xxx/16

Azure DC – East US IA

Reserved Internet Bandwidth

Terminal & License Server

10.01
Approach – SAP Migration to Azure

- Move Group Approach
- ASR to remain as the migration technology.
- Mock validations to mitigate the migration risk, update the documentation and get timing data; however scope of Mock to be agreed upon by team.
- Recommended Migration Groups & Order:
  - SAP-I: ECP, BWP, BOP, DFS and HANA Connector
  - SAP-II: PIP, EPP and ADS2
  - Open Text: All OT components and Active Batch
  - Bolt-on I: Sterling B2Bi, Taulia POD
  - Bolt-on II: Kofax, Rightfax
  - Bolt-on III: IIS Sites (myDFA, Labresults, Entity Search, Farm Supplies, QC500/Fillable PDF)
Same Systems/Applications in Technical Validation & Azure Production cannot co-exist. Technical Validation Environment cannot exist for more than 2 weeks.
Timeline - PRD

February

Mar 10-11

OpenText

Mar 10-11

12 Hrs

16 Hrs.

Apr 7-8

SAP 2: PIP
LCE Impact
EPP ADS

Apr 14-15

BWP BOP

18 Hrs.

Apr 21-22

SAP 1: ECP

15 Hrs.

Apr 28,29

SI, RightFax
Taulia/KoFax
Lessons Learned

- All applications cannot/should not be moved in a single weekend. Very high risk.
- Sizing decision for Azure
- Scope of Mock has to be limited, as it should not impact production.
  - Connectivity (RFCs) can’t be changed
- Any changes to lift and shift approach must be carefully considered (Net new installs, upgrades/patches to environment or landscape, Repointing of environments)
- New builds instead of lift and shift – Active Batch, KoFax
- New License key requirements on Azure hardware for Bolt On systems (KoFax, Taulia POD, OpenText)
- SAP applications must be grouped and moved sequentially.
- Weekend availability of key resources is key (Cap, DFA CoE, DFA Infra, Vendor)
- Two Deep dives per Application are typically required. – team effort.
- Dependence on external vendors, external team members.
- Integration issues where Project team has no direct visibility – (LCE, AS2)
- Scope of Mock determines the level of testing that can be performed, as it should not impact production.
  - Connectivity (RFCs) can’t be changed
Business Value Realized

- SAP Ecosystem Migration (2 datacenters)
  - Investment $1.6 Million.  Annual Savings $2.5 Million
  - Internal Rate of Return 117%  Pay back 16 months
- 50%+ cost reduction on acquisition data center integrations
- Reduce monthly scheduled downtime from 12 hours to 1 or less
  - The cows don’t take holidays!
- Reduced risk from cyber threats (Ex. Spectre, Melt Down)
- Transform IT organization from managing contracts to performing the work
- End fixed price contracts
- Unleash innovation by eliminating rigid contracts restricting access to new technologies
- Ready access to new technologies:  Data Lake, Block Chain, API, and so on!